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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,084	03/01/2002	Ling-Zhong Liu	12653-US	9112
23553	7590	12/06/2004	EXAMINER	
MARKS & CLERK P.O. BOX 957 STATION B OTTAWA, ON K1P 5S7 CANADA			MANOSKEY, JOSEPH D	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,084

Applicant(s)

LIU ET AL.

Examiner

Joseph Manoskey

Art Unit

2113

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Murphy et al., U.S. Patent 6,185,695, hereinafter referred to as "Murphy".
3. Referring to claim 1, Murphy teaches a method of transparent failovers from a primary copy of an object on a first server to a secondary copy on a second server. Murphy also teaches the use of check pointing the object in the secondary server. This is interpreted as a method of achieving context synchronization in a system configured with control redundancy comprising, providing means for a first control element to process a new context and to distribute the new context to a second control element, and providing means at said second control element to maintain synchronization of said new context with said first control element (See Fig. 1, 2B and 5, Col. 1, line 55 to Col. 2, line 25, and Col. 9, lines 13-17).

4. Referring to claim 2, Murphy discloses the client makes requests to the servers, this is interpreted as processing a new context is initiated by an external stimulus message (See Fig. 2B and Col. 4, lines 37-44).

5. Referring to claim 3, Murphy teaches the use of a primary and secondary server, this is interpreted as first control element is an active control complex and said second control element is an inactive control complex (See Fig. 2B and Col. 1, line 55 to Col. 2, line 25).

6. Referring to claim 4, Murphy discloses the use of check pointing the object in the secondary server, this is interpreted as the active control complex calculating a new context and transfers the new context to said inactive control complex (See Col. 9, lines 13-17).

7. Referring to claim 5, Murphy teaches check pointing to the secondary server and then continuing on, this is interpreted as the active control complex transitions into said new context after successfully completing the transfer of said new context to said inactive complex (See Col. 9, lines 13-37).

8. Referring to claim 6, Murphy discloses the primary server replying to all request unless there is a failure, this is interpreted as upon transition of said inactive complex to

said new context said active control complex will acknowledge receipt of said external stimulus (See Fig. 2B and Col. 4, lines 56-64).

9. Referring to claim 7, Murphy teaches the system transparently retrying uncompleted invocations, this is interpreted as external stimulus messages will continue to be sent periodically until an acknowledgement has been received (See Col. 1, lines 64-66).

10. Referring to claim 8, Murphy discloses the system allowing a transparent failover from a first server to a second server, this is interpreted as the inactive control context assumes control upon a failure of said active control context (See Col. 1, lines 55-60).

11. Referring to claim 9, Murphy teaches an apparatus of transparent failovers from a primary copy of an object on a first server to a secondary copy on a second server. Murphy also teaches the use of check pointing the object in the secondary server. This is interpreted as a system for achieving context synchronization in a system configured with control redundancy comprising means for a first control element to process a new context and to distribute the new context to a second control element and means at said second control element to maintain synchronization of said new context with said first control element (See Fig. 1, 2B and 5, Col. 1, line 55 to Col. 2, line 25, and Col. 9, lines 13-17).

12. Referring to claim 10, Murphy discloses a replica manager for a system that transparently failovers from a primary copy of an object on a first server to a secondary copy on a second server, and also teaches the use of check pointing the object in the secondary server, this is interpreted as an Atomic Redundancy Synchronization Transaction device for guaranteeing context synchronization between two identical processes on an active control complex and an inactive control complex (See Fig. 1, 2B and 5, Col. 1, line 55 to Col. 2, line 25, and Col. 9, lines 13-17).

Murphy discloses the client makes requests to the servers, this is interpreted as means in said active control complex to receive an external stimulus message and to calculate a new context in response thereto (See Fig. 2B and Col. 4, lines 37-44). Also, Murphy teaches check pointing to the secondary server then continuing on, this is interpreted as means in said active control complex to transfer said new context to said inactive control context and to transition to said new context (See Col. 9, lines 13-37). Murphy also teaches the use of check pointing the object in the secondary server, this is interpreted as means in said inactive control complex to transition to said new context in synchronization with said new context in said active control complex (See Col. 9, lines 13-17).

Finally Murphy discloses the primary server replying to all request unless there is a failure, this is interpreted as means in said active control complex to acknowledge receipt of said external stimulus message (See Fig. 2B and Col. 4, lines 56-64).

13. Referring to claim 11, Murphy teaches the servers being nodes on a network and including a replica manager that tells the clients which server to connect to, this is interpreted as a naming service is used to enable said active control complex and said inactive control complex to be connected regardless of physical location or network configuration (See Fig. 1, Col. 10, lines 56-67).

14. Referring to claim 12, Murphy discloses the replica handler running on the servers that are attached to storage units, this is interpreted as said naming service is a storage database of control process names and locations (See Fig. 1 and 3).

15. Referring to claim 13, Murphy teaches both the primary and secondary server being sent the request, this is interpreted as said naming service enables the external stimulus messages to be sent to both the active control complex and the inactive control complex (See Fig. 2B).

16. Referring to claim 14, Murphy discloses the system transparently retrying uncompleted invocations, this is interpreted as said external stimulus message is continually sent periodically until an acknowledgement has been received (See Col. 1, lines 64-66).

17. Referring to claim 15, Murphy teaches the system allowing a transparent failover from a first server to a second server when the first server fails to acknowledge the

request, this is interpreted as if said active control context fails to acknowledge said external stimulus message said inactive control context, upon receipt of said message, calculates a new context, transitions to said new process and becomes the active control complex (See Fig. 2B and Col. 1, lines 55-60).

Conclusion

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are examples of closely related failover systems.

U.S. Patent 5,696,895 to Hemphill et al.

U.S. Patent 6,560,617 to Winger et al.

U.S. Patent 6,728,780 to Hebert

U.S. Patent Application Publication 2003/0005350 to Koning et al.


U.S. Patent Application Publication 2003/0097610 to Hofner

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Manoskey whose telephone number is (571) 272-3648. The examiner can normally be reached on Mon.-Fri. (7:30am to 4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JDM
November 30, 2004


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